

## A note on predation of Eastern Grey Kangaroo in the eastern Otway Ranges

I have been studying and collecting data on the predation of large animal and carrion-eating behaviour in western Victoria and south-eastern South Australia since 1990. My primary study area is in the eastern Otway Ranges. An arbitrary size limit has been set on the species preyed on or eaten as carrion that are included in the study. It includes all macropods that can attain a weight greater than 20 kg: the koala, common wombat, all deer species, domestic sheep, goats, alpacas, pigs, cattle and horses. Feral forms of any of the domestic animals are included also, as are the dog and emu.

To date, data on macropods including the eastern grey kangaroo, western grey kangaroo, swamp wallaby and red necked wallaby and on domestic stock including sheep, goat, alpaca, cattle and horse have been recorded as preyed on and also eaten as carrion. The fallow deer has been recorded as eaten as carrion only. I have recorded over 50 large mammal kills within a 20 km radius of the hamlet of Bambra in the eastern Otway Ranges. A widespread network of rural residents, agricultural professionals and recreational hunters provide information regarding the location of large animal carcasses that may be prey.

Most of the animals located have been killed by severe trauma to the neck with separation of cervical vertebrae 1 and 2, sometimes with penetrative wounds to the cranium or with a single crushing or suffocating bite to the throat. Usually the feeding process has consisted of the thorax being opened and the ribs sheared off close to the spine. The heart, lungs and liver were then removed. On the following or subsequent nights the carcasses have often been removed to heavy cover nearby, often bracken fern, where the hams and back straps were eaten. Frequently, after five days the prey item has remained as only a skin with skull attached.

In spring 2007 a foal of a few days of age was recorded in the same district as being alive and well and feeding from its dam at 2330 hours and then being killed and reduced to a skeleton by 0830 hours the next morning. Its skull and neck displayed significant trauma.

One particular carcass was found in a very fresh state and was photographed. In the mid-morning of Saturday 19 February 2005, in the eastern Otway Ranges (approximate location: 38° 36'S; 143° 93'E) the author, in the company of a local bushman, found the remains of an adult female Eastern Grey Kangaroo *Macropus giganteus*. The carcass had been distinctively mutilated but still maintained substantial body heat; rigor mortis had not yet commenced. On inspection the marsupium was found to be elastic and the oversized teat in use expressed milk when squeezed. This indicated it had contained a large pouch young that had been lost only very recently.

Fig. 1 illustrates the amount of tissue and bone that had been removed prior to the carcass being located. The head, neck, and left forelimb were gone; ribs were exposed and sheared off, and the heart, lungs and liver had been removed. There was also damage to the right side hind limb. The right metatarsals were separated from the tibia and remained joined by a fragment of skin. No breaks to the long bones or other penetrative damage to the rest of the carcass could be found. The volume of meat removed from the carcass when originally found—including head and neck, organs, left forelimb, shoulder, and ribs—was conservatively estimated at 10 l. This was based on my experience of butchering such animals.

A motion sensor camera was set up on 20 February 2005, some 5 m from the carcass, but no record was made of any animal visiting as it decomposed. The entire carcass, in a state of



Fig. 1. Dead Eastern Grey Kangaroo *Macropus giganteus* found by the author in the Eastern Otway Ranges 19 February 2005.

advanced decomposition, disappeared on 24 February. No remnants, save a stain of body fluids, remained at the site.

The styles of killing and eating illustrated were not consistent with those of feral pigs, feral dogs, foxes or Wedge-tailed Eagles. Feral pigs and feral dogs are not resident in the district and their field sign is not found. Foxes and Wedge-tailed Eagles are common in the district but they do not have the capacity to remove such an amount of flesh from such a carcass in a short time.

It may be that anecdotal reports of large feline in various parts of southern Australia, in-

cluding the eastern Otway Ranges, need to be investigated with more rigour by the relevant authorities. Material from subsequent kills located will be submitted for DNA analysis to a relevant laboratory in a timely manner for analysis to determine the predator species involved.

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